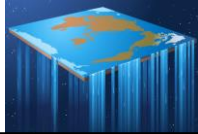


The Flat World Swung Open: How Web Technology Is Revolutionizing Education

Curtis J. Bonk, Professor, Indiana University
President, CourseShare, LLC
cjbonk@indiana.edu
<http://php.indiana.edu/~cjbonk>



Audience Poll #1:

Has learning technology ever transformed your life.



May 10, 2013

10 ed-tech tools of the 70s, 80s, and 90s
eSchool News, Meris Stansbury

<http://www.eschoolnews.com/2013/05/10/10-ed-tech-tools-of-the-70s-80s-and-90s/print/>



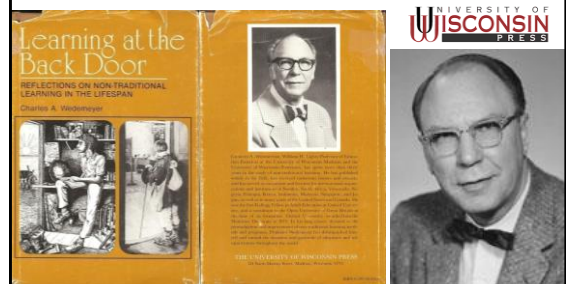
Looking to the Past...



**Life as an accountant/CPA in a
high tech company in the 1980s...**



Took Correspondence & TV Courses
(thanks to Bob Clasen and Charles
Wedemeyer, the University of Wisconsin)



Knowledge Navigator (1987) Apple Computer

<http://www.youtube.com/watch?v=hbA4zfwEoc>



Fast Forward 25+ Years...

"Anyone can now learn anything from anyone at any time."

SKILLSHARE | LEARN | TEACH | [Home](#) | [Sign Up](#)

Learn anything from anyone, anywhere.



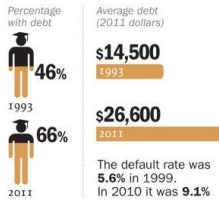
Join us! Start learning and discover unique classes in your city.

November, 2012

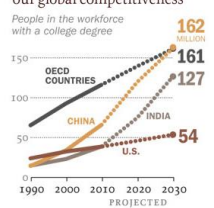
Degrees of Difficulty, Time

<http://nation.time.com/2012/10/18/degrees-of-difficulty/>

Student debt loads are increasing



Having fewer degrees threatens our global competitiveness



September/October, 2012

The Siege of Academy

http://www.washingtonmonthly.com/magazine/SeptemberOctober_2012/features/_03_three_sdocs_n039373.php?page=all

Washington MONTHLY

The Magazine | Blog | College Guide | About Us | Archives | Advertise

Features

September/October 2012

The Siege of Academy



Learning is Changing New Technologies = New Delivery Methods...



Audience Polls #2:

- I. Who remembers where they were when they found out that Steve Jobs passed away?
- II. Who remembers what they were doing on the day that John D. Kennedy was shot?
- III. Who remembers what they were doing on 9/11?
- IV. Who remembers what they were doing on 4/11?



Charles Vest (April 4, 2001)

<http://web.mit.edu/newsoffice/2001/ocw.html>

"This is about something bigger than MIT. I hope other universities will see us as educational leaders in this arena, and we very much hope that OpenCourseWare will draw other universities to do the same. We would be delighted if -- over time -- we have a world wide web of knowledge that raises the quality of learning -- and ultimately, the quality of life -- around the globe."



Technology = Almost Free...



DataWind Prepared \$20 Tablet Computer for Indian Market

A Canada-based company believes it can revolutionize education in India by rolling out a \$20 tablet computer.

What can you buy for \$20? A lunch for two? A new shirt? A few groceries? For India's 220 million schoolchildren, \$20 may soon buy a tablet computer.



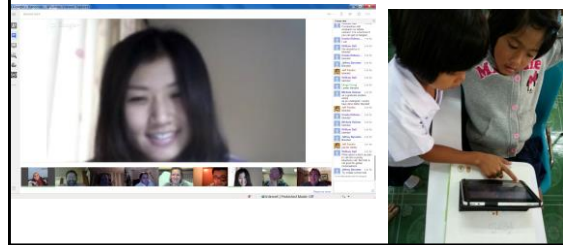
I. Learning is More Open

(80-Year-Old WGU Texas Grad Keeps His Promise, November 30, 2012, Reeve Hamilton, Texas Tribune)

THE TEXAS TRIBUNE
An 80-Year-Old Graduate With an Online Marketing Degree Kept His Promise



II. Learning also is More Collaborative Collaboration and Discussion in Google Hangouts or with iPad, Jan. 28, 2013 (Carrie Gong from Beijing Normal University)



III. Learning is More Mobile

Brown, Keynote talk, "Learning in Hand With Mobile Technology," Wisconsin Distance Teaching and Learning Conference, August 10, 2012

	Beijing 2008	London 2012
Smartphones	139.3 million	657 million
Facebook	90 million	901 million
Twitter	<1 million	300 million
Tweets / day	1.1 million	140 million
Tablets	0	54.8 million
App store downloads	300+ million	25+ billion

Sources: Nielsen, eMarketer, Forrester, Apple



IV. Learning is More Video-Based

Adora Svitak, WFP Youth Representative - 2013
ECOSOC Youth Forum, March 27, 2013

"Shaping tomorrow's innovators: Leveraging science, technology, innovation and culture for today's youth". Statement by the World Food Programme Youth Representative, Ms. Adora Svitak at the 2013 ECOSOC Youth Forum.
<http://webtv.un.org/meetings/events/2013-03-27-ecococ-youth-forum-statement-by-wfp-youth-representative-2013-ecococ-youth-forum-shaping-tomorrows-innovators-leveraging-science-technology-innovation-and-culture-for-todays-youth/257975055001>



V. Learning is More Social

Facebook reaches one billion users, CNN Money, Aaron Smith, October 4, 2012



VI. Learning is More Personal

iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman (January 10, 2013)

<http://mashable.com/2013/01/10/ipotty/>



VII. Learning is More Modifiable

Inside Look: Learning Spaces, Meeting classroom teaching and collaboration expectations, University Business, Feb. 22, 2013

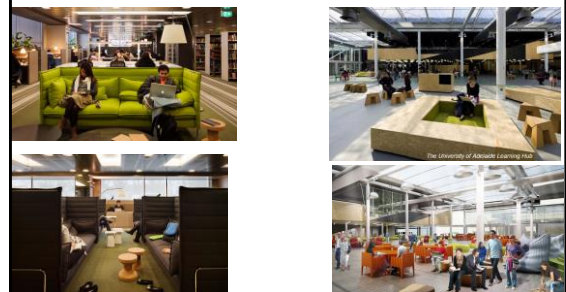
<http://www.universitybusiness.com/article/inside-look-learning-spaces>



VIII. Learning is More Comfortable

Design for Students, with Students, "Hub Central", the \$42 million University of Adelaide learning hub opened in October 2011, May 8, 2012, Mike Roberts

<http://designbuildsource.com.au/design-for-students-with-students>



IX. Learning is More Ubiquitous

Flexible displays bend what's possible for computers, Jon Swartz, USA Today (May 4, 2012)



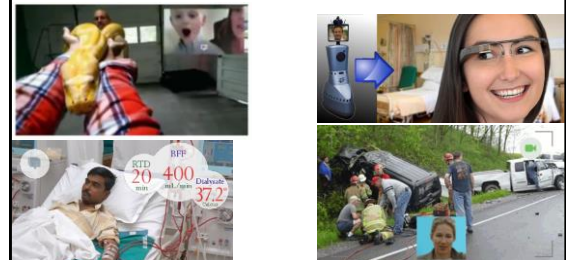
X. Learning is More Instantaneous

April 9, 2013

HER Computer fashions face social test: Can wearable computers fit in? Scott Martin, USA Today

(i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)

<http://www.facomobilehealthcare.com/story/google-glasses-could-have-strong-potential-healthcare-use/2013-02-18>



XI. Learning is More Global

February 22, 2013

NASA's spacey Google+ Hangout shows off zero-G antics – and cats!

http://cosmicsofnews.com/_news/2013/02/22/1287986-nasa-spacey-google-hangout-shows-off-space-antics-and-cats?l



UC Irvine (2013 report)

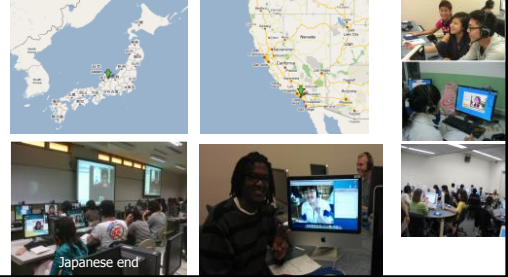
Example 3: Fundamentals of Japanese

Dr. Hidemi Riggs, Fall 2012 & Winter 2013

Tech-enhanced: [EEE AdvancedWebSpace \(Dreamweaver\)](#),

[Skype](#) video conferencing tool, [Active Learning](#)

Format: 5 - 1A lectures (24 students maximum); 3 - 2A lectures (24 students maximum); 2- 3A lectures (24 students maximum)



XII. Learning is More Massive

April 16, 2013 (NovoEd)

New MOOC Provider Says It Fosters Peer Interaction
Chronicle of Higher Education, Jake New

<http://chronicle.com>



February 20, 2013

UW-Madison to expand distance learning with
Massive Open Online Courses, Kari Knutson,
University of Wisconsin-Madison News

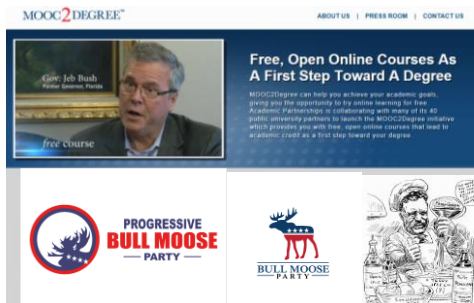
http://www.news.wisc.edu/21520?utm_source=LW&utm_medium=email&utm_campaign=LW2013-02-21



January 23, 2013: The Bush MOOC Party?

Academic Partnerships Launches MOOC2Degree Initiative
Free, Open Online Courses As A First Step Toward A Degree

<http://www.mooc2degree.com/>



October 27, 2012

Travel for Office Hours

Chuck Severance, (U Michigan/Coursera) in Barcelona

<http://www.youtube.com/watch?v=JzNHvmSv8TI>



October 1, 2012: MOOC Students
4 Massive Open Online Courses and How
They Work, Ben Gose, Chronicle of HE

<http://chronicle.com/blogs/techtherapy/2012/10/03/episode-99-what-wearable-computers-could-mean-for-campuses/>



Krissa Swain, of Knoxville, Tenn., is taking "Operations Management" online to help develop her management skills.



Rajeev Bajpai, an airline pilot based in Mumbai, took an online computer-science course to gain programming skills.

November 2, 2012
The Year of the MOOC,
New York Times, Laura Pappano,

<http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?pagewanted=all>



Clockwise, from top left: an online course in circuits and electronics with an M.I.T. professor (edX); statistics, Stanford (Udacity); machine learning, Stanford (Coursera); organic chemistry, University of Illinois, Urbana (Coursera).

April 20, 2013
Two Cheers for Web U!
A. J. Jacobs, New York Times

http://www.nytimes.com/2013/04/21/opinion/jacobs/grading-the-mooc-university.html?pagewanted=all&_r=3&mcetext



May 6, 2013
Faculty Backlash Grows Against Online Partnerships
Chronicle of Higher Education, Steve Kolowich

<http://chronicle.com/article/Faculty-Backlash-Grows-Against/139049/>



Michael Sandel, a Harvard professor, taught an online course that San Jose State U. asked its philosophy professors to use in place of their own instruction. They said no.

By Steve Kolowich

June 19, 2013
2013 is "The Year of the Anti-MOOC"
George Siemens, UW-Madison Summit

<http://globalhighered.wordpress.com/european-mooc-in-global-context/>



February 24, 2013
Big (MOOC) Data, Inside Higher Education,
Dayna Catropa

<http://www.insidehighered.com/blogs/strategy/big-mooc-data>



Duke University
 Bioelectricity: A Quantitative Approach
 Roger Cook-Baker
 Duke University

April 15, 2013

Google boss: Entire world will be online by 2020,
Doug Gross, CNN

http://www.cnn.com/2013/04/15/tech/web/cer-c-schmidt-internet/index.html?hpt=hp_t3

Google boss: Entire world will be online by 2020

By Doug Gross, CNN

Updated 10:20 AM EDT on April 15, 2013 | Photo credit: Mike

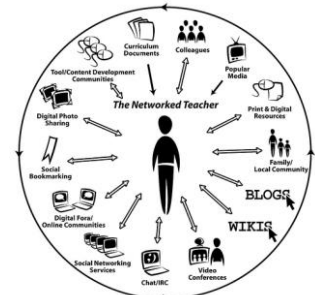
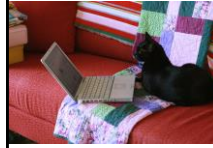


Google Executive Chairman Eric Schmidt says everyone on earth will be connected by 2020.

STORY HIGHLIGHTS **Editor's Note:** Doug Gross covers consumer technology and the Web for CNN.com. Follow him on Twitter, and add him to your Circle on Google+.

Google executive chairman Eric Schmidt says everyone on earth will be connected by 2020.

The Web of Learning



It is very open!

(at least in Norway & the Philippines)



We are entering a jumping off point...



Framework #1: WE-ALL-LEARN: Ten Forces that Opened the Learning World

- **W**eb Searching in the World of e-Books (i.e., Darwin)
- **E**-Learning and Blended Learning
- **A**vailability of Open Source and Free Software (e.g., Moodle)
- **L**everaged Resources and OpenCourseWare (e.g., MIT)
- **L**earning Object Repositories and Portals (i.e., shared content)
- **L**earner Participation in Open Info Communities (YouTube)
- **E**lectronic Collaboration and Interaction (sync and async)
- **A**lternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- **R**ead-Time Mobility and Portability (e.g., iPhone)
- **N**etworks of Personalized Learning (Blogs, RSS)



Audience Participation!

WE

ALL

LEARN!!!



Triple Learning Technology Convergence of "WE-ALL-LEARN"



1. **Pipes:** The availability of tools and infrastructure for learning.
2. **Pages:** The availability of free educational content and resources (OER—Open Educational Resources).
3. **Participatory Learning Culture:** A move towards a culture of open access to information, international collaboration, and global sharing.

Opener #1. Web Searching (e.g., Google, MSN, Yahoo!) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)



January 22, 2013 Free digital textbooks surge in popularity, Sarah Langmead, Assistant Editor, eCampus News, (e.g., BookRix, <http://www.bookrix.com/>)

Free digital textbooks surge in popularity

As college textbook prices continue to climb, a free alternative to it more than half of U.S. colleges are taking advantage.

Publicly searched this past August, [BookRix](http://www.bookrix.com/) produces digital textbooks instead of at least 10 actual texts. BookRix partners on government resources, and offer free learning aids.

Experts in multiple academic fields review gathered content and only trends. Students enter their assigned textbook title into BookRix's search graphics.

BookRix offers students digital textbooks with variable content—free of charge.

Opener #2. E-Learning and Blended Learning

Shaq earns doctorate degree

NEW EARTH WEB EVENT

January 15, 2013 Online programs offered by Kelley and IU schools of education and nursing highly ranked by U.S. News, IU News Room <http://newsinfo.iu.edu/news/page/normal/23687.html>

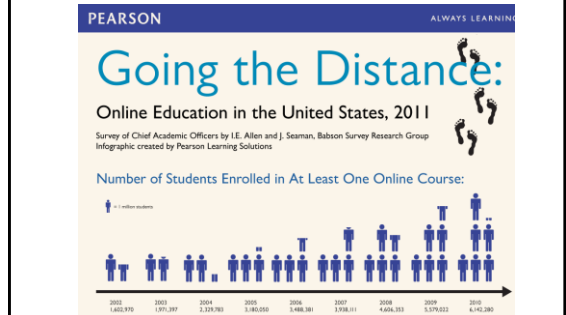
IU News Room

Online programs offered by Kelley and IU schools of education and nursing highly ranked by U.S. News

FOR IMMEDIATE RELEASE
Jan. 15, 2013

BLOOMINGTON, Ind. — Online programs in business, education and nursing at Indiana University were ranked among the best in the nation, all ahead of other Big Ten schools, in the 2013 edition of U.S. News & World Report's Best Online Programs list.

More than six million post-secondary students are taking online classes in the USA; growing by 10% per year. http://sloanconsortium.org/publications/survey/going_distance_2011



Opener #3. Availability of Open Source and Free Software Moodle (July 18, 2013: 72 million users in 237 countries, 84,518 sites, 7.6 million courses)



Opener #4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from Harvard Edx, MITx, CORE, OOPS)



February 16, 2012 Online Badges and Certifications from OER University of Illinois at Springfield, Ray Schroeder <https://sites.google.com/site/opencontinuinged/>

Badges and other alternative certifications

Some sample badges:

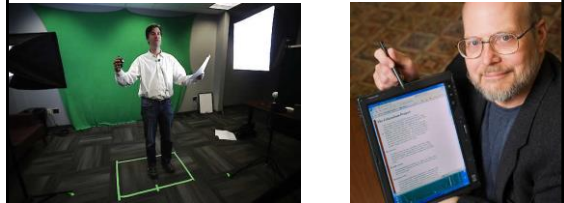


How Will Mozilla's Open Badges Project Affect Higher Ed? by Audrey Walters, Hack (Higher) Education - Inside Higher Ed

The Open Badges Project is a recognition that "learning looks very different today than traditionally imagined. Legitimate and interest-driven learning is occurring through a multitude of channels outside of formal education, and yet much of that learning does not "count" in today's world. There is to demonstrate that learning and transfer it across contexts or use it for real results," Mozilla's Eric Knight told me in an interview for [O'Reilly](#).

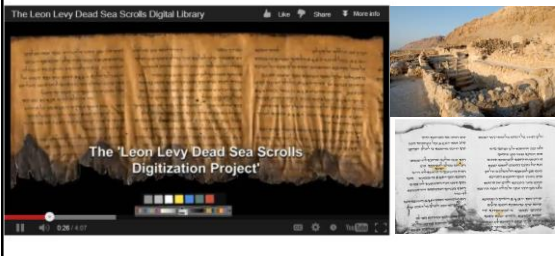
November 18, 2012 Video Streaming MOOCs Gaining Popularity, But New Frontier For Scaling Up Online Classes Is Course Credit, Huffington Post (College), Justin Pope

<http://www.usatoday.com/story/news/nation/2012/11/18/mooc-online-course-credit-education-trend-424000/1713307/>



Opener #5. Online Learning Object Repositories and Portals (shared content)

<http://www.deadseascrolls.org.uk/explore-the-archive>
http://www.deadseascrolls.org.uk/explore-the-archive/search?site_en=Qumran_Caves_4
<https://www.deadseascrolls.org.uk/#home>

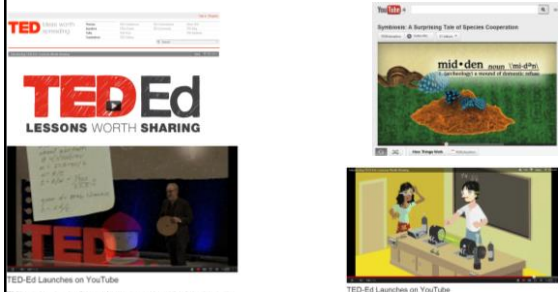


Saylor.org

<http://www.saylor.org/>
 RedHoop
<http://redhoop.org/>



March 13, 2012
Educational Videos: TED-Ed
<http://education.ted.com/>



October 2010, The V-PORTAL (Bonk, IU)
"Video Primers in an Online Repository for e-Teaching and Learning" V-PORTAL,
 TravelinEdMan (27 free/open YouTube videos)
<http://www.youtube.com/user/TravelinEdMan>



Opener #6. Learner Participation in Open Information Communities
 (e.g., Slashdot, Digg, Wikipedia, YouTube)



Opener #7. Electronic Collaboration and Interaction
 (synchronous & asynchronous)
 Soliya Connect
<http://gli.georgetown.edu/#soliya>



April 15, 2013
Guest Speakers

Sara de Freitas and Jim Hensman (<https://connect.iu.edu/p2ie1yx6z6x/>)
 Jay Cross (<https://connect.iu.edu/p4bytsoromh/>)



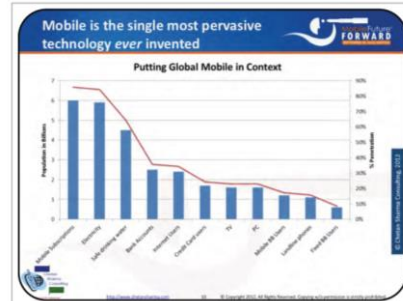
Opener #8. Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)



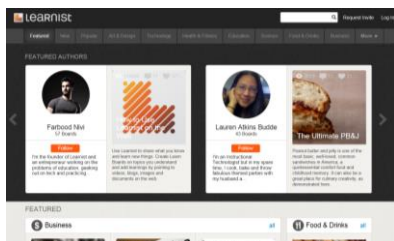
Opener #9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)
60,000 earthlings/hour get mobile



Judy Brown, Keynote talk, "Learning in Hand With Mobile Technology," Wisconsin Distance Teaching and Learning Conference, August 10, 2012



Opener #10. Networks of Personalized Learning (Blogs, Podcasts, MySpace, Flickr, and RSS)



Video Walls of Experts (IQ Wall)
Indiana University unveils high-tech classroom
 The Herald-Times, May 22, 2013, Mike Leonard
<http://www.indianaeconomicdigest.net/main.asp?SectionID=21&SubSectionID=13&ArticleID=6998>



December 16, 2010
Introducing Word Lens

<http://www.youtube.com/watch?v=h2OfQdYrHRs>



What about the Instructor in the Open World?



1. Instructor as Credit Manager



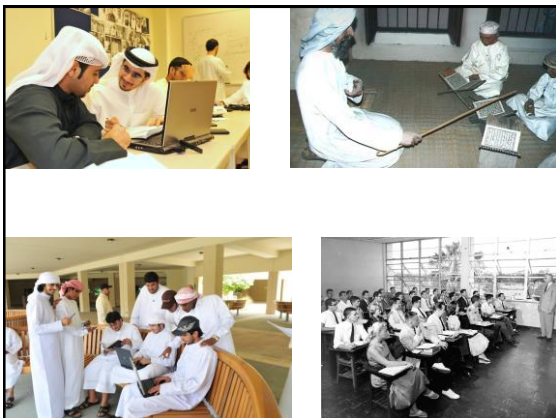
7. Instructor as Conductor



9. Instructor as Curator



10. Instructor as Concierge



Decisions for this Open Ed World...

- **Technology & Administrator Decisions:**
 - What do to about OER, open source, E-books, mobile, etc.?
- **Instructional Designer & Trainer decisions:**
 - Act as Concierge, Counselor, Course facilitator, Credit manager?
- **Formal Learner & Informal Lrnr decisions:**
 - Should I attend traditional university or create your own degree path?
 - How to report use of OER on resumes?

What about the student? The Next Generation is Here!



May 20, 2013

The New Greatest Generation: Why Millennials will Save Us All, Time, Joel Stein

<https://www.time.com/time/magazine/article/0,9171,2143001,00.html>



What did Jean-Luc Picard say?



Ok, Million Dollar Question: What words come to mind when I say that I want to motivate learners?



Framework #2: TEC-VARIETY for Online Motivation and Retention

1. **Tone/Climate:** Psych Safety, Comfort, Belonging
2. **Encouragement, Feedback:** Responsive, Supports
3. **Curiosity:** Fun, Fantasy, Control
- ...
4. **Variety:** Novelty, Intrigue, Unknowns
5. **Autonomy:** Choice: Flexibility, Opportunities
6. **Relevance:** Meaningful, Authentic, Interesting
7. **Interactive:** Collaborative, Team-Based, Community
8. **Engagement:** Effort, Involvement, Excitement
9. **Tension:** Challenge, Dissonance, Controversy
10. **Yields Products:** Goal Driven, Products, Success, Ownership



Examples of TEC-VARIETY



2. Encouragement, Feedback, etc.: A. Voice Feedback

Vocaroo; <http://vocaroo.com/i/s0HA2MPJ3Q4i>



6. Relevance, Meaningfulness: A. Design Multimedia Glossaries

Ozgur Ozdemir, December 2012
<http://r685glossary.shutterfly.com/>
 Umida Khikmatillaeva, Dec. 2011, P540
<http://learningplanet.shutterfly.com/>



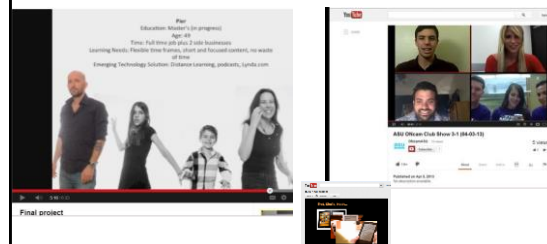
8. Engagement, Effort: A. Arab spring: an interactive timeline of Middle East protests, The Guardian, Garry Blight, and Sheila Pulham, July 12, 2011

<http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline>



10. Yields Products, Goals: A. Final Product Video Summaries

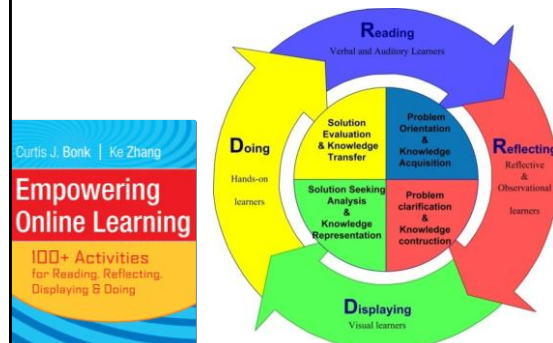
(on IQ Wall, April 22, 2013)
 Piercarlo Abate
<http://www.youtube.com/watch?v=7Q4291qzZaU&feature=youtu.be>
<http://www.youtube.com/watch?v=7Q4291qzZaU&feature=youtu.be> (anonam)



How can technology address diverse learner needs?



Framework #3: The R2D2 Model



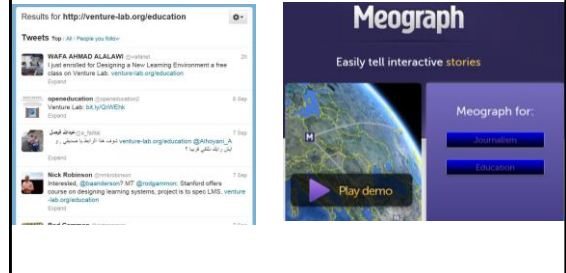
1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.



Read 1a. Interactive Stories

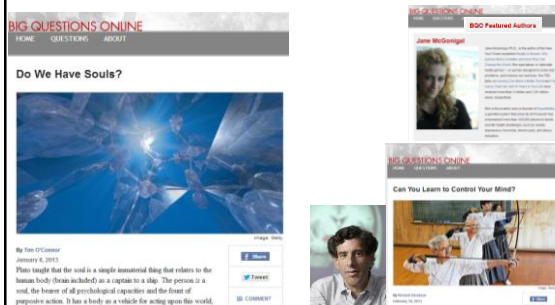
(e.g., Meograph
<http://www.meograph.com/>)



Reflect 2a. Big Issue Reflections

(Big Questions Online (BQO)), January 8, 2013
 (e.g., Do We Have Souls?)

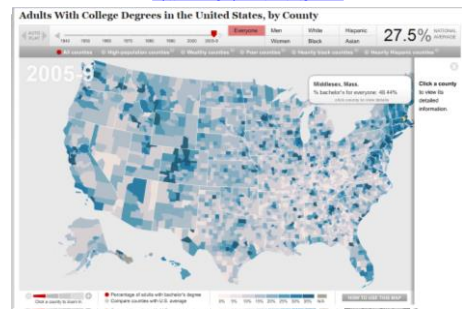
<https://www.bigquestionsonline.com/content/do-we-have-souls>



Display 3a. Interactive Map Timelines

(adults with college degrees by county, May 7, 2012)

http://bdavisampus.com/articles/with_sampson_interviews_josh_keller_on_interactive_geocharts_for_higher_education
<http://data.huffingtonpost.com/2013/03/gun-deaths>



Do 4a. Student Class Documentaries

Umida's R546 Documentary Project

http://www.youtube.com/watch?v=EMLTzqCV_5A



Slides at: TrainingShare.com
 Papers: PublicationShare.com
 Book: <http://worldisopen.com/>

WE
ALL
LEARN!!!



OOPS
 Open Online Platform System
 网络式课程平台